



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of: KNAGGS, et al.

Appln. No.: 10623962

Filed: July 21, 2003

For: INTERNALIZED COMPONENT FOR FUEL TANKS

Attorney Docket No: 10541-1815

Examiner: Unknown

Art Unit: Unknown

Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL

Sir:

Attached is/are:

- ☒ Petition For Granting of a Filing Date and Issuance of a Filing Receipt with attached Exhibits A-D.
- ☒ Declaration of Samantha Thomas
- ☒ Declaration of Shirley Courey
- ☒ Return Receipt Postcard

Fee calculation and payment:

- ☐ No additional fee is required.
- ☐ An extension fee in an amount of \$\_\_\_\_\_ for a \_\_\_\_\_-month extension of time under 37 C.F.R. § 1.136(a).
- ☐ A petition or processing fee in an amount of \$ under 37 C.F.R. § 1.17(h).
- ☐ An additional filing fee has been calculated as shown below:

				Small Entity		or	Other Than Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	Rate	Add'l Fee
Total		Minus			x \$9=		x \$18=	
Indep.		Minus			x 43=		x \$86=	
First Presentation of Multiple Dep. Claim					+\$145=		+\$290=	
					Total	\$	Total	\$

Fee calculation and payment:

- ☐ A check in the amount of \$\_\_\_\_\_ to cover the above-identified fee(s) is enclosed.
- ☐ Please charge Deposit Account No. 06-1500 (VISTEON GLOBAL TECHNOLOGIES, INC.) in the amount of \$. A copy of this Transmittal is enclosed for this purpose.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 06-1500. A copy of this Transmittal is enclosed for this purpose.

Respectfully submitted,

November 13, 2003

Date

Eric J. Sosenko (Reg. No. 34,440)  
Attorney/Agent for Applicant

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450, on the below date:

Date: November 13, 2003

Name: Terry L. Wand

Signature:

Terry L. Wand

BRINKS  
HOFER  
GILSON  
& LIONE

BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

**PETITION FOR GRANTING OF A FILING DATE  
AND ISSUANCE OF A FILING RECEIPT**

Sir:

This Petition is filed in accordance with 37 C.F.R. 1.10(e) to accord the above-referenced application a filing date of July 21, 2003, the date of deposit with the United States Postal Service as "Express Mail", and to request issuance of an official Filing Receipt reflecting the same.

**Factual Background**

On July 21, 2003, the above-referenced patent application (a copy of which is enclosed as Attachment A) was finalized for filing with the United States Patent and Trademark Office (the "Office") via the U.S. Postal Service's "Express Mail" service. Express Mail label number, EV329457020US, was applied to the transmittal accompanying the application and the application, transmittal and return postcard were placed in the corresponding Express Mail envelope.

This Express Mail envelope, along with several other Express Mail envelopes, were picked up at the law offices of the undersigned on July 21, 2003 by an employee of the United States Postal Service. Written confirmation of this pickup is evidenced by the attached United States Postal Service Pickup Service Statement (enclosed as Attachment B), which clearly bears the signature of the United States Postal Service employee and the pickup date of July 21, 2003.

Since the depositing of this application with the United States Postal Service and including the date of this Petition, no return receipt postcard has been received from the Office. Additionally, no official filing receipt has been received from the Office.

Upon discovering that no return receipt postcard or official filing receipt had been received, the undersigned attempted to confirm receipt of the application by utilizing the Office's PAIR system. No confirmation of receipt of the application could be made.

Thereafter, the undersigned confirmed through the United States Postal Service that the application had been delivered to the Office, at its Arlington, Virginia address, and had been signed for by J. Steikel. A copy of the United States Postal Service Track confirm received (bearing the Express Mail label number) is enclosed as Attachment C.

Further, a customer copy of the Express Mail Label showing the date in as July 21, 2003, the requested filing date, is provided as Attachment D.

#### Requirements For Grantable Petition

According to 37 C.F.R. 1.10(e):

- (1) The Petition must be filed promptly;
- (2) The number of the Express Mail mailing label must have been placed on the correspondence prior to the original filing;
- (3) The Petition must include (a) a copy of the originally deposited papers showing the number of the Express Mailing label thereon; (b) a copy of the Express Mailing label showing the in date; (c) a copy of any other official notation by the U.S. Postal Service relied upon to show the date of deposit; and (d) if the requested filing date is different than the date in on the Express Mail mailing label, a showing which establishes that the requested filing date was the date the correspondence was deposited in the Express Mail Post Office prior to the last scheduled pickup for that day.
- (4) The Petition must include a statement which establishes the original deposit of the correspondence and that the copy of the correspondence, the copy of the Express Mail mailing label, and the copy of any return post card receipt, and any

official notation entered by the United States Postal Service are true copies of the originals.

### Conclusion

In accordance with §1.10(e)(1), the circumstances described above establish this Petition is being promptly filed on November 13, 2003, discover of not having received a return receipt post card receipt or official filing receipt from the Office.

In accordance with §1.10(e)(2), the number of the Express Mailing label EV 329457020US was placed on the original correspondence, as shown on the Transmittal of Attachment A.

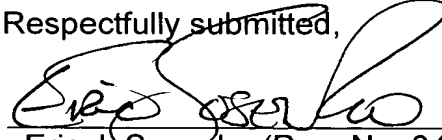
In accordance with §1.10(e)(3), Attachment A is a copy of the original correspondence (the above-referenced patent application, a Transmittal in duplicate, 3 sheets of drawings, a Combined Declaration and Power of Attorney, an Assignment Recordation Cover Sheet and Assignment, an Information Disclosure Statement, a PTO Form 1449), showing the number of the Express Mailing label on the Transmittal. Also enclosed is a copy of the Express Mailing label bearing the "in-date" of July 21, 2003; a copy of the United States Postal Service Track and Confirm statement indicating delivery to and signed for by an employee of the Office; and a copy of the Pickup Service Statement bearing the number of the "Express Mail" mailing label, the date of pickup of July 21, 2003 and bearing the signature of a United States Postal Service employee.

In accordance with §1.10(e)(4), original signed statements from the persons preparing and depositing the application with the United States Postal Service are also attached. The statement recites all copies of the original correspondence, the mailing label, and pickup service statement, are true copies of the originals.

Accordingly, it is respectfully requested the United States Patent and Trademark Office accord this application a filing date as of July 21, 2003, the date of deposit with the U.S. Postal Service as "Express Mail", issue an official filing receipt reflecting the same and place the application for examination.

11/13/03  
Date

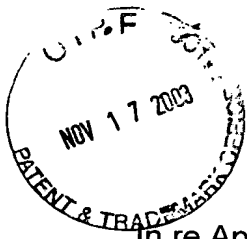
Respectfully submitted,



Eric J. Sosenko (Reg. No. 34,440)  
Attorney/Agent for Applicant

Enclosures:

Attachment A: Utility Transmittal in duplicate,  
3 sheets of drawings,  
a Combined Declaration and Power of Attorney,  
an Assignment Recordation Cover Sheet and Assignment,  
an Information Disclosure Statement, a PTO Form 1449  
Attachment B: United States Postal Service Pickup Service Statement  
Attachment C: United States Postal Service Track Confirm  
Attachment D: Customer Copy of the Express Mail Label  
Declaration of Shirley Courey  
Declaration of Samantha Thomas



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Appln. of: KNAGGS, et al

Appln. No.:

Filed: July 21, 2003

For: INTERNALIZED COMPONENT  
FOR FUEL TANKS

Attorney Docket No: 10541-1815

Examiner: Unknown

Art Unit: Unknown

Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF SAMANTHA THOMAS  
UNDER 37 C.F.R. §1.10(e)**

Dear Sir:

I, Samantha Thomas, hereby declare that:

1. I am a receptionist at the law offices of Brinks Hofer Gilson & Lione.
2. I confirmed the pickup of the "Express Mail" package bearing the Express Mail Label Number EV329457020US from the Brinks Hofer Gilson & Lione Express Mail outgoing mailbox by a United States Postal Service employee on July 21, 2003.
3. I received a Pickup Service Statement, signed by the United States Postal Service employee, confirming that the "Express Mail" package bearing Express Mail Label Number EV329457020US and the pickup date of July 21, 2003.
4. The copies enclosed herewith are true copies of the Express Mail label and Pickup Service Statement as originally mailed or received.
5. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the

like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of the above-identified application, and any patent issuing thereon or any patent to which this declaration is direction.

Dated: November 13, 2003   
Samantha Thomas



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Appln. of: KNAGGS, et al

Appln. No.:

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For: INTERNALIZED COMPONENT  
FOR FUEL TANKS

Attorney Docket No: 10541-1815

Examiner: Unknown

Art Unit: Unknown

Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF SHIRLEY COUREY  
UNDER 37 C.F.R. §1.10(e)**

Dear Sir:

I, Shirley Courey, hereby declare that:

1. I am the legal secretary for Michael N. Spink, an attorney with Brinks Hofer Gilson & Lione.
2. At the request of Michael N. Spink, I deposited the above-referenced Patent Application, a Utility Transmittal in duplicate, 3 sheets of drawings, a Combined Declaration and Power of Attorney, an Assignment Recordation Cover Sheet and Assignment, an Information Disclosure Statement, a PTO Form 1449 (one sheet) and cited references as "Express Mail" in the Brinks Hofer Gilson & Lione Express Mail outgoing mailbox on July 21, 2003.
3. The Express Mail envelope, Patent Application, and Utility Transmittal all included the Express Mail label number EV329457020US.
4. The copies enclosed herewith are true copies of the correspondence and mailing label as originally mailed.

5. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of the above-identified application, and any patent issuing thereon or any patent to which this declaration is direction.

Dated: 11-13-03

Shirley Courcy  
Shirley Courcy

In re Application of: Richard Allen Knaggs et al.  
For: INTERNALIZED COMPONENT FOR FUEL TANKS  
Attorney Docket No: 10541-1815  
Express Mail<sup>®</sup> mailing label number: EV 329457020 US  
Date of Deposit: July 21, 2003



**BRINKS  
HOFER  
GILSON  
& LIONE**

## UTILITY PATENT APPLICATION TRANSMITTAL

MS Patent Application  
Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is a new application under 37 C.F.R. § 1.53(b), including the following elements and other papers:

1. ☒ Specification, including 13 pages of application (including title page, claims and Abstract), 3 sheet(s) of drawings, and the following Appendices: \_\_\_\_\_.
2. ☒ Combined Declaration and Power of Attorney (3 pages) (☒ Executed ☐ Unexecuted)
3. ☒ Information Disclosure Statement, including Form PTO-1449 (3 sheets) and copies of references cited
4. ☒ Assignment Recordation Cover Sheet and attached assignment to: Visteon Global Technologies, Inc.
5. ☐ Other: \_\_\_\_\_
6. ☒ Return Postcards (2)
7. Fee calculation and payment:

Claims as Filed	Col. 1	Col. 2
For	No. Filed	No. Extra
Basic Fee		
Total Claims	20	0
Indep. Claims	2	0
Multiple Dependent Claims Present		

\*If the difference in col. 1 is less than zero, enter "0" in col. 2.

Small Entity	
Rate	Fee
	\$ 375
x\$9=	\$
x\$42=	\$
+\$140=	\$
Total	\$

Other Than Small Entity	
Rate	Fee
	\$ 750
x\$18=	\$0
x\$84=	\$0
+\$280=	\$
Total	\$750.00

- ☐ A check in the amount of \$\_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ Please charge my Deposit Account No. 06-1500 in the amount of \$750.00. A copy of this Transmittal is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 06-1500. A copy of this Transmittal is enclosed.
- ☒ Any additional filing fees required under 37 CFR § 1.16.
- ☒ Any patent application processing fees under 37 CFR § 1.17.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 06-1500. A copy of this Transmittal is enclosed.
- ☒ Any filing fees under 37 CFR § 1.16 for presentation of extra claims.
- ☒ Any patent application processing fees under 37 CFR § 1.17.
8. Correspondence Address: Please address all future communications to:

Michael N. Spink  
BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610  
(734) 302-6000

7/21/03  
Date

Respectfully submitted,

Michael N. Spink (Reg. No. 47,107)  
☒ Attorney/Agent of Record  
☐ 37 C.F.R. 1.34(a)

BRINKS HOFER GILSON & LIONE  
P.O. Box 10395, Chicago, IL 60610

In re Application of: Richard Allen Knaggs et al.  
For: INTERNALIZED COMPONENT FOR FUEL TANKS  
Attorney Docket No: 10541-1815  
Express Mail<sup>®</sup> mailing label number: EV 329457020 US  
Date of Deposit: July 21, 2003



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HOFFER  
GILSON  
& LIONE

### UTILITY PATENT APPLICATION TRANSMITTAL

MS Patent Application  
Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is a new application under 37 C.F.R. §1.53(b), including the following elements and other papers:

1. ☒ Specification, including 13 pages of application (including title page, claims and Abstract), 3 sheet(s) of drawings, and the following Appendices: \_\_\_\_\_.
2. ☒ Combined Declaration and Power of Attorney (3 pages) (☒ Executed ☐ Unexecuted)
3. ☒ Information Disclosure Statement, including Form PTO-1449 (3 sheets) and copies of references cited
4. ☒ Assignment Recordation Cover Sheet and attached assignment to: Visteon Global Technologies, Inc.
5. ☐ Other: \_\_\_\_\_
6. ☒ Return Postcards (2)
7. Fee calculation and payment:

Claims as Filed	Col. 1	Col. 2
For	No. Filed	No. Extra
Basic Fee		
Total Claims	20	0
Indep. Claims	2	0
Multiple Dependent Claims Present		

\*If the difference in col. 1 is less than zero, enter "0" in col. 2.

Small Entity	
Rate	Fee
	\$ 375
x\$9=	\$
x\$42=	\$
+\$140=	\$
Total	\$

Other Than Small Entity	
Rate	Fee
	\$ 750
x\$18=	\$0
x\$84=	\$0
+\$280=	\$
Total	\$750.00

- ☐ A check in the amount of \$\_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ Please charge my Deposit Account No. 06-1500 in the amount of \$750.00. A copy of this Transmittal is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 06-1500. A copy of this Transmittal is enclosed.
- ☒ Any additional filing fees required under 37 CFR § 1.16.
- ☒ Any patent application processing fees under 37 CFR §1.17.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 06-1500. A copy of this Transmittal is enclosed.
- ☒ Any filing fees under 37 CFR § 1.16 for presentation of extra claims.
- ☒ Any patent application processing fees under 37 CFR § 1.17.

8. Correspondence Address: Please address all future communications to:

Michael N. Spink  
BRINKS HOFFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610  
(734) 302-6000

7/21/03

Date

Respectfully submitted,

Michael N. Spink (Reg.No. 47,107)

- ☒ Attorney/Agent of Record  
☐ 37 C.F.R. 1.34(a)

BRINKS HOFFER GILSON & LIONE  
P.O. Box 10395, Chicago, IL 60610



"Express Mail" mailing label number: EV329457020 US

Date of Deposit: July 21, 2003

Our Case No.10541-1815

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR(S):	Richard Allen Knaggs Vern Osenbaugh
TITLE:	INTERNALIZED COMPONENT FOR FUEL TANKS
ATTORNEY(S):	Michael N. Spink Steven L. Oberholtzer BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, ILLINOIS 60610 (734) 302-6000

## **INTERNALIZED COMPONENT FOR FUEL TANKS**

### **FIELD OF THE INVENTION**

**[0001]** The present invention relates generally to internalizing components in automobile fuel tanks, and more particularly relates to attaching components to the inner wall of blow-molded fuel tanks.

### **BACKGROUND OF THE INVENTION**

**[0002]** Attaching a component internally within a blow-molded fuel tank is a complicated process. Generally, these internal components have been designed with weld feet on the appropriate portions for attachment to the inner wall of the tank. The component is placed on a blow pin and is inserted inside a molten plastic parison. The weld feet are then melted into the molten parison as the fuel tank mold is closed.

**[0003]** Unfortunately, this method results in several drawbacks. For example, this process increases the manufacturing cycle time and destructive testing must be done to assure that the welding of the weld feet is secure to the tank shell. Finally, these internalized components are difficult to service. Accordingly, there exists a need to provide an improved method or structure for attaching a component internally within a blow-molded fuel tank.

### **BRIEF SUMMARY OF THE INVENTION**

**[0004]** The present invention provides an assembly for internal placement of a component within a vehicle fuel tank. The assembly generally includes a first housing having a first projection form thereon and a second housing having a

second projection form thereon. The second housing is adjustable relative to the first housing, and a spring biases the first and second housings apart. The fuel tank is defined in part by a first wall and a second wall. The first wall includes a first depression sized to receive the first projection and the second wall includes a second depression sized to receive the second projection. In this way, the first and second projections are biased into the first and second depressions to securely hold the component within the vehicle fuel tank.

**[0005]** According to more detailed aspects, the component and the first and second housings are located entirely within the fuel tank. That is, the component does not utilize an access opening extending through the fuel tank wall to provide secure attachment. A pin may be attached to the first housing to limit the movement of the second housing relative to the first housing. Preferably, the first housing telescopically receives the second housing. The first housing may contain a grade vent valve, and a third housing may be positioned between the first and second housings. Here, the spring engages the second and third housings to bias the second housing away from the first and third housings. The third housing telescopically engages the second housing.

**[0006]** The first and second projections are preferably tapered to promote seating of the projections within the depressions. The first and second projections may include a key member which corresponds to key holes defined by the first and second depressions. In order to prevent rotation of the housings and the component, the projections may have a non-circular cross-sectional shape. Preferably, the first and second projections have an oblong cross-sectional shape. The first and second depressions are preferably formed on first and second plateaus

raised from the surface of the first and second walls. This helps the manufacturer to identify the location of attachment. Further, the first and second housings can define a rim from which the projection extends to promote seating on the plateau.

**[0007]** In another embodiment of the present invention, a component is provided for internal placement within a vehicle fuel tank. The component generally includes a first housing and a second housing. A spring biases the first and second housings apart. A first connection member is attached to the first housing and a second connection member is attached to the second housing. The second housing is adjustable relative to the first housing to position the first and second connection members for selective engagement of the fuel tank.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0008]** The accompanying drawings incorporated in and forming a part of the specification illustrate several aspects of the present invention, and together with the description serve to explain the principles of the invention. In the drawings:

**[0009]** FIG. 1 is a front view of a component for internal placement within a vehicle fuel tank;

**[0010]** FIG. 2 is a front view of an assembly having the component shown in FIG. 1 internally attached to a vehicle fuel tank; and

**[0011]** FIG. 3 is a cross-sectional view taken about the line 3-3 of FIG. 2.

#### DETAILED DESCRIPTION OF THE INVENTION

**[0012]** Turning now to the figures, FIG. 1 depicts a front view of a component 10 for internal placement within a vehicle fuel tank 12 (FIG. 2). For purposes of illustrating the present invention, the component 10 has been shown as including a

grade vent valve 14 which includes a first housing 16. The details of the valve 14 will not be described here, but suffice it to say that a grade vent valve is a typical fuel tank component which closes off the flow of fuel from the tank based on the grade or angular position of the valve 14 and vehicle relative to the ground. Nonetheless, it will be recognized by those skilled in the art that numerous other components that are desired to be located within the fuel tank 12 may be employed in accordance with the teachings of the present invention.

**[0013]** The component 10 further includes a second housing 18 and a third housing 20. While the first and second housings 16, 18 have been shown as separate elements connected by screws 22, it will be recognized that the first and second housings 16, 18 may be integrally formed as a single housing member. The second and third housings 18, 20 are tubular in shape, and the second housing 18 telescopically receives the third housing 20. It will be recognized that the third housing 20 could also telescopically receive the second housing 18. In either case, the inner housing member could comprise a solid member, although the housing preferably has a tubular shape. It can be seen in FIG. 2 that the first, second and third housings 16, 18, 20, and more specifically the entire component 10 is located entirely within the fuel tank 12. That is, the component 10 does not utilize an access opening into the tank 12 to secure the component 10 therein. Stated another way, the receiving members 50, 52 and their depressions 56, 60 are horizontally spaced from the access opening.

**[0014]** As best seen in the cross-sectional view of FIG. 3, the second housing 18 telescopically receives the third housing 20, and a spring 24 is interposed between the housings 18, 20. More specifically, the spring 24 is positioned within

the second housing 18 and engages a first end 26 of the first housing 16 and a first end 28 of the third housing 20. The spring 24 biases the second and third housings 18, 20 away from each other, i.e., in opposing directions. A pin 19 extends through the second housing 18 and limits the distance which the third housing 20 may extend into the second housing 18.

**[0015]** The first housing 14 includes a first connection member 30 at its free end 32, while the third housing 20 includes a second connection member 34 at its free end 36. The first connection member 30 generally includes a projection 38 extending away from a flange 40. Similarly, the second connection member 34 includes a projection 42 extending away from a flange 44.

**[0016]** As best seen in FIGS. 2 and 3, the connection members 30, 34 are structured to correspond with receiving members 50, 52 formed in the fuel tank 12. More specifically, the fuel tank 12 is defined in part by a lower wall 46 and an opposing upper wall 48. As best seen in FIG. 3, the receiving member 50 is integrally formed in the lower wall 46 and includes a raised portion or plateau 54 defining a depression 56. Similarly, the upper tank wall 48 includes the receiving member 52 integrally formed therein, defined by a raised plateau 58 having a depression 60 formed therein. The depressions 56, 60 are sized and structured to correspond to the projections 38, 42 defined by the first and third housings 16, 20. The flanges 40, 44 are structured to rest against the exposed surface of the plateaus 54, 58.

**[0017]** As shown in the figures, the projections 38, 42 are tapered, as are the corresponding depressions 56, 60. This aids in the proper seating of the component 10 within the fuel tank 12. As also shown, the projections 38, 42 have a circular

cross-sectional shape. However, it will be recognized that the projections 38, 42 may have any desired shape. One preferred shape is a non-circular shape, such as a polygonal or oblong shape. Such non-circular cross-sectional shapes aid in restricting the motion of the component 10, and more specifically the first and second housings 16, 20. By virtue of the non-circular shape, the structural members (i.e., housings 16, 18, 20) will be prevented from rotating within the tank 12. To the same end, the first and second projections 38, 42 could also include a radially extending key member (not shown) which corresponds with a key hole or key slot formed into the depressions 56, 60.

**[0018]** In operation, the fuel tank 12 is molded with the receiving members 50, 52 integrally formed therein. The component 10 is then inserted through an access opening, and the third housing 20 is displaced relative to the second housing 18 to shorten the overall length of the component 10. The projections 38, 42 are then located within the depressions 56, 60, and the biasing force provided by spring 24 presses the first housing 16 and its projection 38 into engagement with the depression 60 formed in the upper wall 48 of the tank 12. Similarly, the third housing 20 is biased downwardly such that the projection 42 engages the depression 56 of the lower wall 46 of the fuel tank 12. In this way, the relative positioning of the first and second connection members 30, 34 (biased apart from each other via spring 24) allows for selective engagement of the fuel tank 12, and in turn such as the attachment of the component 10. This provides easy servicing of the component 10 while being nondestructive of the fuel tank 12.

**[0019]** The foregoing description of various embodiments of the invention has been presented for purposes of illustration and description. It is not intended to be

exhaustive or to limit the invention to the precise embodiments disclosed. Numerous modifications or variations are possible in light of the above teachings. The embodiments discussed were chosen and described to provide the best illustration of the principles of the invention and its practical application to thereby enable one of ordinary skill in the art to utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated. All such modifications and variations are within the scope of the invention as determined by the appended claims when interpreted in accordance with the breadth to which they are fairly, legally, and equitably entitled.

## CLAIMS

1. An assembly for internal placement of a component within a vehicle fuel tank, the assembly comprising:
  - a first housing having a first projection formed thereon;
  - a second housing adjustable relative to the first housing, the second housing having a second projection formed thereon;
  - a spring biasing the first and second housings apart; and
  - a fuel tank defined in part by an first wall and a second wall, the first wall including a first depression sized to receive the first p  
  
projection, the second wall including a second depression sized to receive the second projection.
2. The assembly of claim 1, wherein the first and second housings are located entirely within the fuel tank.
3. The assembly of claim 1, wherein both the first and second housing are adjustable relative to the first and second walls of the fuel tank.
4. The assembly of claim 1, further comprising a pin attached to the first housing, the first pin positioned to limit the movement of the second housing relative to the first housing.

5. The assembly of claim 1, wherein the first housing telescopically receives the second housing.

6. The assembly of claim 1, wherein the first housing contains a grade vent valve.

7. The assembly of claim 1, further comprising a third housing positioned between the first and second housings, the spring engaging the second and third housings to bias the second housing away from the first and third housings.

8. The assembly of claim 1, wherein the first and second projections are tapered to promote seating of the first and second projections in the first and second depressions.

9. The assembly of claim 1, wherein the first and second projections each include a key member and the first and second depressions each include a key hole size to receive the key member.

10. The assembly of claim 1, wherein the first and second projections have a non-circular cross-sectional shape.

11. The assembly of claim 10, wherein the first and second projections have an oblong cross-sectional shape.

12. The assembly of claim 1, wherein in the first and second depressions are formed on first and second plateaus raised from the surface of the first and second walls.

13. The assembly of claim 12, wherein the first housing defines a first rim from which the first projection extends.

14. The assembly of claim 1, wherein the first wall defines an access opening, the first and second depressions being horizontally spaced from the access opening.

15. A component for internal placement within a vehicle fuel tank, the component comprising:

- a first housing and a second housing;

- a spring biasing the first and second housings apart;

- a first connection member attached to the first housing;

- a second connection member attached to the second housing

the second housing being adjustable relative to the first housing to position the first and second connection members for selective engagement of the fuel tank.

16. The component of claim 15, wherein the first and second connection members each include a projection.

17. The component of claim 16, wherein the projections are tapered to promote seating of the projections.

18. The component of claim 16, wherein the projections have an oblong cross-sectional shape.

19. The component of claim 15, wherein the first and second connection members each include a rim and a projection extending therefrom.

20. The component of claim 15, wherein the component is located entirely within the fuel tank.

## ABSTRACT

An assembly is provided for internal placement of a component within a vehicle fuel tank. The assembly generally includes a two housing elements biased apart to retain the component within the fuel tank. The component may be non-destructively and selectively attached to the tank. Additional features prevent unwanted movement of the component relative to the fuel tank.

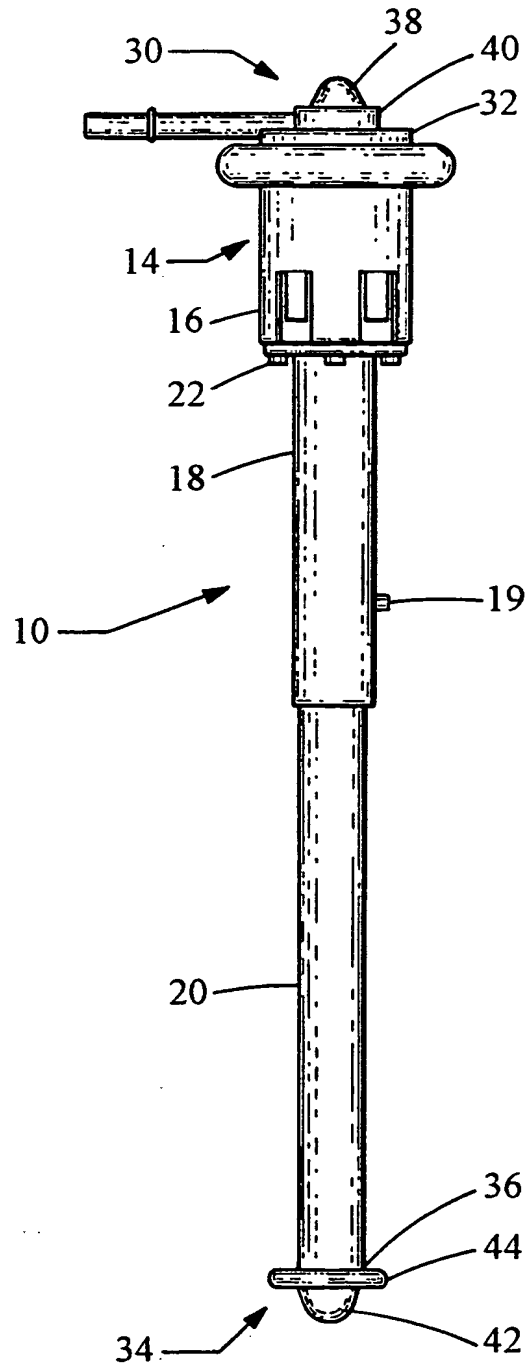


Fig. 1

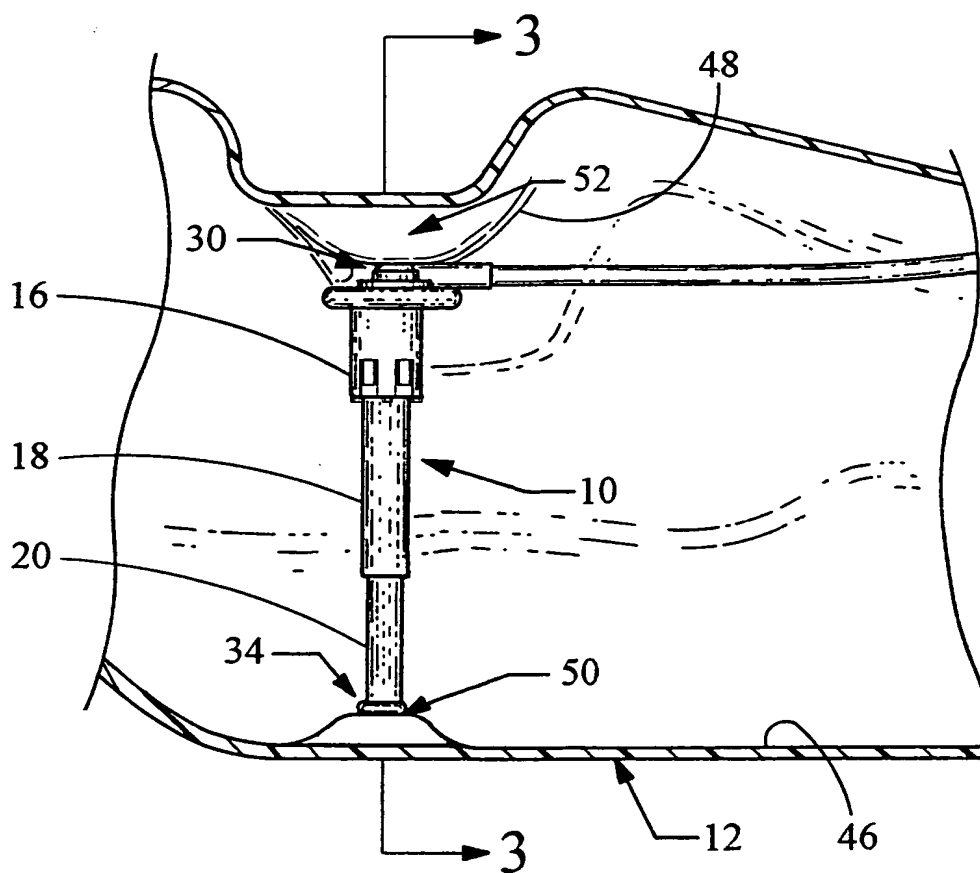
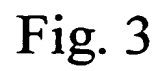
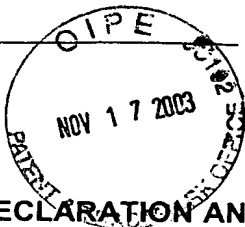


Fig. 2

## Sheet 3 of 3





Attorney Docket No.: 10541-1815

Visteon Case No.: V203-0042

## DECLARATION AND POWER OF ATTORNEY ORIGINAL APPLICATION

As a below named inventor, I hereby declare:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor or an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled:

### INTERNALIZED COMPONENT FOR FUEL TANKS

the specification of which (check one)

☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as United States Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge my duty to disclose to the United States Patent and Trademark Office all information that I know to be material to the patentability of this application as defined in Title 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Priority Not Claimed

\_\_\_\_\_  
(Number)                      (Country)                      (Filing Date)

☐

\_\_\_\_\_  
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I hereby claim the benefit under 35 U.S. C. Section 119(e) of any United States provisional application(s) listed below:

\_\_\_\_\_  
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\_\_\_\_\_  
(Application Serial No.)                      (Filing Date)

\_\_\_\_\_  
(Application Serial No.)                      (Filing Date)

I hereby claim the benefit under 35 U.S.C. Section 120 of any United States applications(s), or Section 365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C.F.R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status: patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status: patented, pending, abandoned)
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the registered practitioners associated with the customer number printed below as my attorneys, with full power of substitution and revocation, to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith, and to act on my behalf before the competent International Authorities in connection with any and all international applications filed by me.



**29074**

PATENT TRADEMARK OFFICE

Address all correspondence and telephone calls to:

Steven L. Oberholtzer  
BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610  
(734) 302-6000

Full name of sole or first inventor	Richard Allen Knaggs	
Sole or first inventor's signature	<i>Richard Allen Knaggs</i>	Date 7-15-2003
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Citizenship	US	
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Full name of second inventor, if any

Vern Osenbaugh

Second inventor's signature

*Vern Osenbaugh*

Date

7-15-03

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Citizenship

US

Post Office Address

134 Southern Shores, Brooklyn, MI 48230

Full name of third inventor, if any

Third inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of fourth inventor, if any

Fourth inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of fifth inventor, if any

Fifth inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of sixth inventor, if any

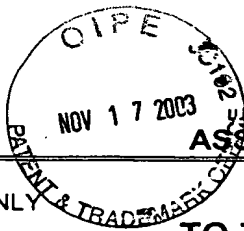
Sixth inventor's signature

Date

Residence

Citizenship

Post Office Address



# ASSIGNMENT RECORDATION COVER SHEET

PATENTS ONLY

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## TO THE COMMISSIONER FOR PATENTS

Please record the attached original document or copy thereof.

1. Name of Party(ies) conveying an interest:

Richard Allen Knaggs  
Vern Osenbaugh

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

2. Name and Address of Party(ies) receiving an interest:

Visteon Global Technologies, Inc.  
Suite 728 Parklane Tower East  
1 Parklane Blvd  
Dearborn, MI 48126

Additional name(s) and addresses attached?

☐ Yes ☒ No

3. Description of the interest conveyed:

☒ Assignment

☐ Change of Name

Other:

☐ Security Agreement

☐ Merger

Execution Date: 07/15/03

4. Application number(s) or patent number(s). Additional sheet attached? ☐ Yes ☒ No

If this document is being filed together with a new application, the execution date of the application is:  
07/15/03

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Michael N. Spink  
BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, IL 60610

6. Number of applications and patents involved: 1

7. Total fee (37 CFR 3.41)

\$ 40.00

☐ Enclosed

☒ Authorized to be charged to Deposit Account  
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TECHNOLOGIES, INC.)

8. ☒ Please charge any deficiencies in fee or credit any overpayment to Deposit Account No. 06-1500.

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Michael N. Spink

47,107

Name of Person Signing

Signature

7/21/03

Date

Total number of pages including cover sheet, attachments, and document: 2

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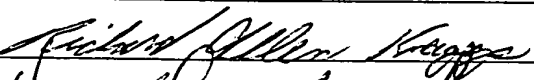
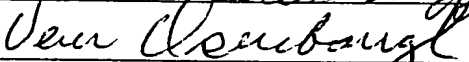
## ASSIGNMENT

WHEREAS, we have invented: INTERNALIZED COMPONENT FOR FUEL TANKS, identified as Visteon Disclosure No.: V203-0042 and Attorney Docket No.: 10541-1815, and described in the application executed on the same date hereof.

WHEREAS, VISTEON GLOBAL TECHNOLOGIES, INC., a corporation organized under the laws of the State of Michigan and located at Suite 728, Parklane Towers East, One Parklane Boulevard, Dearborn, Michigan 48126, is desirous of acquiring an exclusive right to said invention.

For valuable consideration, receipt of which is hereby acknowledged, we hereby sell and assign to VISTEON GLOBAL TECHNOLOGIES, INC., the full and exclusive right to said invention, to all patent applications for said invention in the United States and in all other countries, including all rights of priority in and to said invention in such other countries, and to all patents issued on said invention in the United States and in all other countries; and we hereby request the Director of the United States Patent and Trademark Office to issue all patents on said invention to VISTEON GLOBAL TECHNOLOGIES, INC, as the assignee.

Executed by:

Name	Signature	Date
Richard Allen Knaggs		7-15-03
Vern Osenbaugh		7-15-03

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:  
KNAGGS, et al.

Serial No.: Unknown

Filed:

For: INTERNALIZED COMPONENT  
FOR FUEL TANKS



Examiner: Unknown

Group Art Unit:

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
U.S. Patent and Trademark Office  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. §1.56, and more particularly in accordance with 37 C.F.R. §1.97(b), Applicant cites the following references (each listed for the Examiner's convenience on the enclosed Form PTO-1449):

No.	Date of Publication	Patentee/Applicant/Assignee
1,469,937	Oct. 9, 1923	Hutchinson
1,448,580	Mar. 13, 1923	Tresemmer, et al.
4,114,783	Sep. 19, 1978	Wempe, et al.
4,219,047	Aug. 26, 1980	Polley
4,618,422	Oct. 21, 1986	Sasaki, et al.
4,716,931	Jan. 5, 1988	Shibamoto
5,052,437	Oct. 1, 1991	Danna
5,236,000	Aug. 17, 1993	Kizer
5,249,594	Oct. 5, 1993	Kizer
5,960,816	Oct. 5, 1999	Mills, et al.
5,996,607	Dec. 7, 1999	Bergsma, et al.
6,035,883	Mar. 14, 2000	Benjey
6,176,260 B1	Jan. 23, 2001	Hahner, et al.
6,382, 231 B2	May 7, 2003	Sugizaki, et al.
6,408,867 B2	Jun. 25, 2002	Aoki, et al.

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P.O. Box 10395  
Chicago, IL 60610

A copy of each listed reference for which a copy is required under 37 C.F.R. §1.98(a)(2) is also enclosed. Applicant respectfully solicits the Examiner's consideration of the listed references and entry thereof into the record of this application.

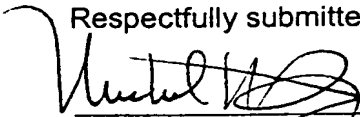
By submitting this Statement, Applicant is attempting to fully comply with the duty of candor and good faith mandated by 37 C.F.R. §1.56. As such, this Statement is not intended to constitute an admission that any of the enclosed references, or other information referred to therein, constitutes "prior art" or is otherwise "material to patentability," as that phrase is defined in 37 C.F.R. §1.56(a).

Applicant has calculated no fee to be due in connection with the filing of this Statement. However, the Commissioner is authorized to charge any fee deficiency associated with the filing of this Statement to a deposit account, as authorized in the Transmittal accompanying this Statement.

7/21/03

Date

Respectfully submitted,

  
\_\_\_\_\_  
Michael N. Spink (Reg. No. 47,107)  
Attorney/Agent for Applicant

Enclosures: Form PTO-1449 (one sheet)  
Copies of listed references



FORM PTO-1449	SERIAL NO.	CASE NO. 10541-1815
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE	GROUP ART UNIT
(use several sheets if necessary)		APPLICANT(S): Knaggs, et al.

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	1,469,937	10-9-1923	Hutchinson		10-6-1920
	A2	1,448,580	3-13-1923	Tresemmer, et al.		3-15-1922
	A3	4,114,783	9-19-1978	Wempe, et al.	222/398	8-24-1977
	A4	4,219,047	8-26-1980	Polley	137/590	5-12-1978
	A5	4,618,422	10-21-1986	Sasaki, et al.	210/172	8-27-1985
	A6	4,716,931	1-1-1988	Shibamoto	137/558	10-20-1986
	A7	5,052,437	10-1-1991	Danna	137/587	12-3-1990
	A8	5,236,000	8-17-1993	Kizer	137/38	10-5-1992
	A9	5,249,594	10-5-1993	Kizer	137/15	1-7-1993
	A10	5,960,816	10-5-1999	Mills, et al.	137/202	3-26-1997
	A11	5,996,607	12-7-1999	Bergsma, et al.	137/202	4-15-1998
	A12	6,035,883	3-14-2000	Benjey	137/202	3-13-1998
	A13	6,176,260 B1	1-23-2001	Hahner, et al.	137/590	7-26-1999
	A14	6,382,231 B2	5-7-2002	Sugizaki, et al.	137/15.26	3-8-2001
	A15	6,408,867 B2	6-25-2002	Aoki, et al.	137/202	3-15-2001

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES NO

EXAMINER  
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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